CLAIMS

1. An ultrasonic diagnostic apparatus, comprising:

ultrasonic wave transmission/reception means that transmits/receives an ultrasonic wave with respect to a subject;

a tomographic image processing part that forms a tomographic image representing a structure of the subject based on a reception signal;

a tissue characteristic image processing part that forms a tissue characteristic image representing a physical characteristic of a tissue of the subject through analysis of the reception signal;

memory means that stores the tomographic image and the tissue characteristic image, respectively;

an image composing part that combines at least the tomographic image and the tissue characteristic image;

display means that displays at least the tomographic image and the tissue characteristic image; and

control means that, during an operation of ultrasonic wave transmission/reception, allows the tomographic image to be renewed in an arbitrary cycle, displayed by the display means, and stored in the memory means, while allowing the tissue characteristic image to be renewed in a cycle different from the cycle for the tomographic image, displayed by the display means, and stored in the memory means, and during a suspension of ultrasonic wave transmission/reception, allows arbitrary one of the tissue characteristic images that have been acquired previously and one of the tomographic images that is in synchronization with the tissue characteristic image to be read out from the memory means, respectively and displayed by the display means.

2. The ultrasonic diagnostic apparatus according to claim 1,

wherein the display means is divided into a first display region and a

second display region, and displays at least the tomographic image in the first display region and at least the tomographic image on which the tissue characteristic image is superimposed in the second display region,

during the operation of ultrasonic wave transmission/reception, the control means allows the tomographic image to be displayed at least in the first display region of the display means, while allowing the tissue characteristic image to be displayed in the second display region of the display means, and

during the suspension of ultrasonic wave transmission/reception, the control means allows the tissue characteristic image and one of the tomographic images that is in synchronization with the tissue characteristic image to be read out from the memory means, respectively and displayed at least in the second display region of the display means.

3. The ultrasonic diagnostic apparatus according to claim 2, wherein during the operation of ultrasonic wave transmission/reception, one of the tomographic images that is in synchronization with the tissue characteristic image is displayed in the second display region.

4. The ultrasonic diagnostic apparatus according to claim 2 or 3, wherein during the suspension of ultrasonic wave transmission/reception, one of the tomographic images that is in synchronization with the tissue characteristic image is displayed in the first display region.

5. The ultrasonic diagnostic apparatus according to claim 2 or 3, wherein during the suspension of ultrasonic wave transmission/reception, the tissue characteristic image that is obtained based on a time period in which the tomographic image displayed in the first

display region is included and the tomographic image that is in synchronization with the tissue characteristic image are displayed superimposedly in the second display region.

6. The ultrasonic diagnostic apparatus according to claim 1,

wherein the image composing part allows a related waveform that contains information corresponding to at least one of the tomographic image and the tissue characteristic image to be displayed on a display screen of the display means in such a manner as to be combined with the tomographic image and the tissue characteristic image, and

during the suspension of ultrasonic wave transmission/reception, the control means allows a portion of the related waveform to be displayed in a highlighted manner, which corresponds to a time period in which the tissue characteristic image being displayed is formed.

7. The ultrasonic diagnostic apparatus according to claim 1,

wherein the tissue characteristic image is an elastic modulus image.

8. The ultrasonic diagnostic apparatus according to claim 1,

wherein the tissue characteristic image is an image representing a strain or a strain rate.

9. The ultrasonic diagnostic apparatus according to claim 1,

wherein the tissue characteristic image is an image representing a viscosity.